

REMARKS

The Office Action mailed January 26, 2005, has been carefully considered. The present Amendment is intended to be a complete response thereto and to place the case in condition for allowance. A Petition for a two-month extension of time and fee therefor are filed herewith.

Claims 36 are pending. Claims 1, 3, 7, 11, 14, 24, 27, and 36 have been amended. Support for the amendment to claims 1, 14, and 27 is found, *inter alia*, in the specification on page 1, lines 4-7, and page 12, lines 8-11. Claims 3, 7, 11, 24, and 36 have been amended in accordance the Examiner's suggestion.

THE CLAIMS ARE PROPER

Claims 3, 4, 7, 16, 17, 20, 29, 30, and 33 stand objected to because 1) in claim 3, "the phrase 'PVC' has an error;" and 2) in claim 7, "wherein" is misspelled.

Regarding to claim 3, as suggested by the Examiner, Applicant has amended "PVC" to spell out the full chemical name followed by the abbreviation in parenthesis.

Regarding claim 7, "wherein" has been properly spelled.

Accordingly, Applicant respectfully requests withdrawal of the objections.

THE CLAIMS ARE DEFINITE

Claims 11, 24, and 36 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite. The Examiner alleges that claims 11, 24, and 36 are indefinite for reciting the phrase "aluminum/mylar" because it is not clear if "the phrase means 'aluminum and Mylar' or aluminum or mylar'." Further, the Examiner alleges that Mylar is a trademark and can be changed. Applicant has amended claims 11, 24, and 36 to recite "aluminum and polyester."

Therefore, the claims are now definite and Applicant respectfully requests withdrawal of the rejection.

THE CLAIMS ARE NOT ANTICIPATED

Claims 1, 6, 8, 14, 19, and 21 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Madry et al. (U.S. Patent No. 5,262,593). Applicant respectfully traverses the rejection.

To anticipate a claim, the reference must teach every element of the claim. *See* MPEP § 2131. "A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). "The identical invention must be shown in as complete detail as is contained in the ... claim." *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). The elements must be arranged as required by the claim, but this is not an *ipsissimis verbis* test, i.e., identity of terminology is not required. *In re Bond*, 910 F.2d 831, 15 USPQ2d 1566 (Fed. Cir. 1990).

Madry et al. fail to teach every element of the claimed invention. In particular, Madry et al. fail to disclose a plenum cable that complies with NFPA 232. The present invention is drawn to plenum cables that are used in the plenum space of a building. The plenum space is especially vulnerable in fires, because when the fire in a building reaches the plenum space, it can spread quickly throughout the entire floor of the building if flammable material occupies the plenum. The fire could travel along the length of cables which are installed in the plenum if the cables are not rated for plenum use, i.e., do not possess the requisite flame and smoke retardation

characteristics. Also, smoke can be conveyed through the plenum to adjacent areas and to other floors with the possibility of smoke permeation throughout the entire building. Therefore, to be rated for plenum use, a cable must comply with NFPA 232 standard fire test. The test includes burning the cable in a standard specified tunnel using standard operation, calibration, maintenance, sample preparation, and instrumentation; and measuring the emitted flame propagation distance, peak optical density, and average optical density. To pass the test and be rated for plenum use, the cable must meet the following criteria: flame propagation distance (PFD) ≤ 5 feet, peak optical density (POD) ≤ 0.5 , and average optical density (AOD) ≤ 0.15 . The present invention meets these criteria.

Madry et al. fail to teach a plenum cable. The cable of Madry et al. may or may not be used in a plenum space because it may not meet the requirement of NFPA 232. For example, if the spacer 29 of Madry et al. is wound too close together in the cable, it would not pass the NFPA 232 test because it provides too much fuel in the event of a fire. There is no teaching in Madry et al. how to make the cable comply with NFPA 232. On the other hand, the cable of the present invention meets the NFPA 232 standard. Therefore, Madry et al. do not anticipate the present invention as claimed.

THE CLAIMS ARE NOT OBVIOUS

Claims 2, 12, 13, 15, 27, 28, 32, and 33 stand rejected under 35 U.S.C. § 103(a) as being obvious over Madry et al. in view of Tuunanen et al. (U.S. Patent No. 6,130,385). Claims 3 and 16 stand rejected under 35 U.S.C. § 103(a) as being obvious over Madry et al. in view of Bondon (U.S. Patent No. 3,227,800). Claims 4 and 17 stand rejected under 35 U.S.C. § 103(a) as being obvious over Madry et al. in view of Sullivan (U.S. Patent No. 3,089,567). Claims 5 and 18

stand rejected under 35 U.S.C. § 103(a) as being obvious over Madry et al. in view of Willis et al. (U.S. Patent No. 4,910,998). Claims 7 and 20 stand rejected under 35 U.S.C. § 103(a) as being obvious over Madry et al. Claims 9-11 stand rejected under 35 U.S.C. § 103(a) as being obvious over Madry et al. in view of Houston et al. (U.S. Patent No. 6,596,393). Claims 22-26 stand rejected under 35 U.S.C. § 103(a) as being obvious over Madry et al. in view of Bleich et al. (U.S. Patent No. 5,898,133). Claim 29 stands rejected under 35 U.S.C. § 103(a) as being obvious over Madry et al. in view of Tuunanen et al., and further in view of Bondon. Claim 30 stands rejected under 35 U.S.C. § 103(a) as being obvious over Madry et al. in view of Tuunanen et al., and further in view of Sullivan. Claim 31 stands rejected under 35 U.S.C. § 103(a) as being obvious over Madry et al. in view of Tuunanen et al., and further in view of Willis et al. Claims 34-36 stand rejected under 35 U.S.C. § 103(a) as being obvious over Madry et al. in view of Tuunanen et al., and further in view of Houston et al. Applicant respectfully traverses the rejections.

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. *See* MPEP 2143.

The references, taken alone or in combination, fail to teach or suggest all the claim limitations. In particular, the references fail to teach or suggest a plenum cable that complies with NFPA 232. None of the prior art, except Bleich et al. discloses a plenum cable. Even so, the combination of any of the prior art with Bleich et al. does not render the present invention

obvious because the combination would not have resulted in the present invention. The cable of Bleich et al. uses a foamed polyethylene dielectric between the two conductors and a flame resistant halogen polymer jacket to effect a plenum cable. The use of flame retardant material is common in the plenum cable art, but is completely different from the present invention. Instead of using flame retardant materials that are expensive, the present invention uses material used to make non-plenum cables. However, Applicant has discovered that by using a proper helical wrap, it is possible to reduce the flammability of the cable by using less insulation, while maintaining a proper effective dielectric to achieve desired signal propagation. In doing so, Applicants are able to produce a relatively inexpensive plenum cable, while maintaining proper signal propagation characteristics. That is clearly not taught or suggested by any of the cited references.

Moreover, the combination of Madry et al. and Bleich et al. may or may not produce a plenum cable. Even though Bleich et al. uses flame retardant material, the addition of the spacer of Madry et al. may increase the flammability of the cable significantly to fail the NFPA 232 test, because the spacer material is additional fuel for a fire. For example, if the spacer material is wrapped in a tight helix, it will not pass the NFPA 232 flame test because too much fuel material is available for a fire to spread, even though fuel resistant materials are used elsewhere.

Therefore, because the combination of the references does not teach or suggested the present invention, the rejections under 35 U.S.C. § 103(a) are improper. Accordingly, Applicant respectfully requests withdrawal of the rejection.

CONCLUSION

Applicant has responded to the Office Action mailed January 26, 2005. All pending claims are now believed to be allowable and favorable action is respectfully requested.

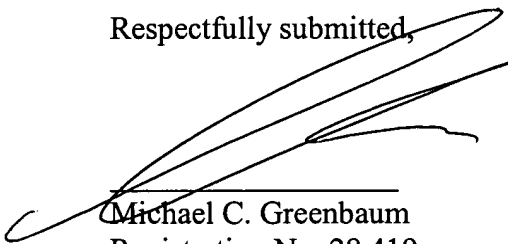
In the event that there are any questions relating to this Amendment or to the application in general, it would be appreciated if the examiner would telephone the undersigned attorney concerning such questions so that the prosecution of this application may be expedited.

Please charge any shortage or credit any overpayment of fees to BLANK ROME LLP, Deposit Account No. 23-2185 (110938-00168). In the event that a petition for an extension of time is required to be submitted herewith and in the event that a separate petition does not accompany this response, applicant hereby petitions under 37 C.F.R. 1.136(a) for an extension of time.

Any fees due are authorized above.

Respectfully submitted,

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